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METHOD OF ÆSTHETICS: A NOTE.

ÆSTHETICS, as understood in this paper, is the investigation of the nature, laws, and ends of art, as a science of the universal idea of beauty. The history of thought specially in its more recent phases warrants this definition. The peculiarity of modern æsthetics, as compared with ancient, is the cultivation of closer relations with all the sciences. We see, as never before, that the beautiful in art is always the true in science.[1]

The unfruitfulness of æsthetics in the past is a fact to which the student is attracted very early in his studies. Sully, among others, has called attention to this as perhaps the most characteristic fact about the subject, but Grosse has, it would seem, pointed to the real reason of this unfruitfulness when he says that it is "because the science of art still holds to a wrong method, and because it still limits itself to an insufficient material."[2] At any rate the history of opinion clearly shows that the real results have come since the time when the subject of method became of supreme importance, *i. e.*, practically since the time of Kant. In Fechner, and the advocates of psycho-physics, we see this tendency clearly portrayed. To a large extent, however, methodology is still the most pressing problem in the scientific investigation of the phenomena of art. It is certain that until we are agreed as to our methods, little that is scientific can be expected. Meanwhile, perhaps the best service that can be rendered not only to art but also to science is to discuss the question.

I wish to suggest a few thoughts on this subject in the present paper, looking towards a somewhat radical reform in the methods employed in the study of art. Without further introduction to, or justification of, this procedure, let me invite attention to two aspects of this question: (1) the claims of scientific method on æsthetics; (2) the influence of this method on the problems of æsthetics.

[1] Karl Pearson, *Grammar of Science*, 2d ed., pp. 30 ff.

[2] *Die Anfange der Kunst*, ch. 1. (Eng. tr.)

I.

I assume in the first of these inquiries the possibility of a science of beauty. What I desire now to show is that in order to fully accomplish this worthy end, to be science in the proper sense of the word, æsthetics can and must assimilate the scientific method.

Method is the distinguishing feature of science when compared with ordinary knowledge or opinion. The knowledge of the plain man and that of the scientist is not different in material content; both have the same universe to study, and the same data to explain. In this sense, therefore, it is true as Clifford says: "There are no scientific subjects—the subject of science is the (common) human universe; that is to say, everything that is, or has been, or may be related to man."[1]

What, then, we may inquire first of all, is true scientific method? This question faces us, and it must be answered, at any rate briefly, before we urge the claims of this method in its application to the study of art.

Scientific method aims at three things:

(1) Classification.

(2) Discovery of laws.

(3) Criticism.

And the greatest of these is criticism.

Now all science is bound together by the unity of this threefold purpose. By this I do not mean to imply that it is not possible to increase the *ways* of *applying* this method. For there is a great variety of these, which claim the title of being exclusively scientific, but which are rather determinations of standpoint than independent methods. Such a division as that into the logical, psychological, and metaphysical, is a case in point. Here we have no clear recognition of the common purposes that animate every branch of scientific investigation, but rather a series of points of view, from which various classes of phenomena may be scientifically studied. It is true, of course, that science and logic, for example, are related; but logic is not science, and the methods of science are not the methods of logic, as the latter science is at present understood. Indeed, it is highly doubtful in the writer's mind at least, if the question of method properly falls within the domain of logic at all. It is the function of logic not to determine the methods of science, but to tell us if they agree with the laws of thought. Logic is a science of *thought*, not of fact. Psychology is a science so far as it follows a scientific method; and it is the function of psychology to set the psychic facts in scientific order, and not, as is too often done, to invent that order. Metaphysics may be a science; if so, its true function will be to set forth the conclusions of science as a harmony of spiritual concepts under a universal synthetic ideal.

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[1] *Essays*, 2d series, "Aims and Instruments of Scientific Thought."

The same general criticism needs to be made of another series of so-called scientific methods, which are not so much methods as determinations of standpoints. Such 'methods' as the so-called genetic method, the nature method, the historical, anthropological or ethnological method, the sociological method, and so forth, are not properly scientific methods. What makes them scientific is that they partake of the three comprehensive aims of science already mentioned. What unity science enjoys is due to the common method pursued in *all* its branches.

Now the claim of the scientific method to the whole realm of human knowledge, actual and possible, rests on two considerations which I shall immediately apply to the phenomena of art. In the first place, the scientific method claims to be the only complete method of studying the universe, and therefore of any part of it. For example, the first business of this method is classification; the facts of any particular domain of investigation, say the phenomena of art, must be first of all set in order, so that they may be accurately envisaged. What this statement involves as regards the true determination of any scientific fact cannot be fully set forth here; but meanwhile it may be observed that, inasmuch as facts are the data of all true science, this labor of classification stands in the forefront of æsthetic problems. Next to this aim of the scientific method, comes the discovery of laws in the sequence and relationship of the classified phenomena. For *mere* facts do not constitute science; to description must be added explanation, and explanation is, in the ultimate analysis, the causal interpretation of phenomena under the principle of sufficient reason. Scientific laws are the best explanations the human mind can give of the mode of behavior of observed sequences. In this sense there are laws of art, or explanations and interpretations of the facts of art under the principle of sufficient reason. But, the third aim of the scientific method is the most important of all, viz., criticism; for thereby the knowledge of science becomes free from error and 'knowledge for all.' If the first two aims concern the *tasks* of pure science, as such, the third is, so to speak, the *life* of pure science, and therefore inseparable from it. When these three objects, classification, discovery of laws, criticism, have been carried out in relation to any facts of the universe, we have a complete study of the same.

But this statement involves the second consideration to which reference was made; for if one method rules throughout the whole domain of scientific knowledge, it follows that no class of facts can be isolated from its influence. Therefore, by the operation of this method, æsthetics is necessarily brought into connection with all science. This I regard as the most important modification introduced by science into æsthetics; by it the facts are unified and rendered available both for theory and practice.

In the light of these considerations we may conclude that if there be a science of beauty, it is because there is a scientific *method* of treating the phenomena presented in æsthetic experience and the history of art. For it is this method alone that renders it possible to classify the facts of experience, to deduce laws therefrom, and to criticise the results.

II.

In turning now to the second aspect of this question, we come to the influence of scientific method on the *problems* of æsthetic science, presuming now that such a science exists. The clue to this important matter is contained in what has just been argued, that true scientific method, when applied to the science of æsthetics, brings this science into connection with all true science. For the æsthetic judgment is not essentially different from the scientific judgment as such. Professor Tyndall,[1] as Hume long before him, taught us to connect the imagination with both forms of the noëtic faculty. Karl Pearson, indeed, goes so far as to say that science owes more to the training of the imagination, simply as an instrument of discovery, than to any other psychical activity, the laws of science being regarded (by him) as products of the creative imagination. Without going as far as this, we are certainly warranted by conservative opinion in concluding that the scientific interpretation of the universe is the only one which can permanently satisfy the æsthetic judgment.

If it is claimed that this destroys the sentimental beauty and poetry of life, it is safe to reply that science is no enemy to true sentiment; what is false and meaningless it is the common business of both art and science to abolish; for the false and meaningless can never be permanently beautiful. "There is more real beauty in what science has to tell us of the chemistry of the distant star, or in the life-history of a protozoan, than in any cosmogony produced by the creative imagination of a pre-scientific age."[2]

Taking up the first group of problems, the empirical, and recalling that the three-fold aim of the scientific method is to classify, explain, and criticise, we may see at once what is the first of these empirical problems of æsthetics. It is that of classifying, explaining, and criticising the phenomena presented in art life, and, through the scientific method, that of bringing all science to the service of this object. Take an illustration as the analysis of any æsthetic fact, say the awareness of a rhythmical foundation in art work, which involves the consideration of the various ways of discriminating this fact from other facts and their classes. Abstraction comes first.

But again, this fact, when clearly discriminated, is seen in this way to stand in some organic concrete connection with all the facts of the universe capable of clear perception. Therefore, the student of æsthetic rhythm is obliged, as Fechner, Helmholtz, Stumpf, Mach, and others have shown, to consult physics for a complete account of the judgment that certain rhythms in music, poetry, architecture, and natural objects, afford pleasure and suggest to the mind the presence of an absolute ideal in beauty. Sensations of rhythm are, in short, the first great classification of æsthetic facts that the application of the scientific method to art affords.

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[1] *Fragments of Science*, Vol. II, pp. 101 ff.

[2] *Grammar of Science*, p. 36.

But this is not all. Further analysis reveals the presence of organic data not exactly falling under the known laws of matter and motion. The phenomena of growth, implicated in all living things, in their processes—these phenomena are all illustrated in the æsthetic life. Play, impulse, instinct, imitation, and related facts are, as all science now acknowledges, facts resting on organic changes subject to geographical, climatic, and other influences. Sensations of rhythm are facts in space and time, and under the form of feelings of pleasure take hold of all these organic sciences. In other words, æsthetic evolution displays throughout what Mr. Marshall calls the activity of the algedonic principle. The roots of this principle are in the physics of rhythm; but its complete consideration involves the study of the natural history of pleasure.

And this is not so easy a task as many students of æsthetics have supposed. It involves considerations ranging all the way from natural and sexual selection up to the highest development of mental action in the sublime and the beautiful, in short all the organic sciences, physics, and biology. But out of this herculean labor (some of which has already been done), we shall get a new classification of the æsthetic facts, which will place at the disposal of the imagination, in both science and art, a vast field of true æsthetic pleasure otherwise lost in vagueness and falsehood. If, too, for obvious reasons, we must rely chiefly in this work on those branches of biology which deal with the psychic root, biopsychics and psycho-physics, this must not be understood to mean that all related sciences are not of service to it. Classification is a task which belongs to every branch of science, and each part throws light on every other.

The same general line of remark applies to the second great aim of the scientific method as applied to æsthetics, viz., explanation under the concept of law. The precise determination of æsthetic law, like the same object in physics and biology, depends on the analysis and classification of the data under investigation. Classification leads to law under the relating activity of the mind. If æsthetics be a normative science, as I believe, the norms or laws of beauty can be made out; in fact such a science of norms already exists in a crude state in the laws of rhythm, pleasure, and taste. Here, as in all branches of science, the object must be to discover the real relations and sequences of the phenomena.

The same is true of the third main division of our science, the philosophical. The object of philosophical æsthetics is to clear the data and laws of æsthetic science from false or erroneous material, and to unify the valid concepts into a single system of correlated ideas. But the *method* of this work must still be that of science; criticism must rest on classification and inspire it; it must lead to the discovery of laws: constant correction is the *conditio sine qua non* of clearer synthesis in every branch of philosophical investigation. This limitation the philosophical student shares equally with the student of empiric science. The science of æsthetics is not complete without the effort to state clearly what that science teaches of an *ultimate* nature. The only difference here, in comparison with the other and more primary branches of the science, is that the critical spirit prevails above the practical. But the method is still the same.

Surely the time prophesied by Wordsworth has well nigh come: "If (he said) the time should ever come when what is now called science . . . shall be ready to put on, as it were, a form of flesh and blood, the poet will lend his divine spirit to aid the transfiguration, and will welcome the being thus produced as a valued and genuine inmate of the household of man. The remotest discoveries of the chemist, the botanist, or the mineralogist will be as proper objects of the poet's art as any upon which it can be employed. If the labors of men of science should create any material revolution, direct or indirect, in our condition, and in the impressions which we habitually receive, the poet will sleep then no more than at present, but he will be ready to follow the steps of the man of science, not only in those general indirect effects, but he will be at his side carrying sensation into the midst of the objects of science itself."[1]

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[1] Observations prefixed to the *Lyrical Ballads.* Since the above note was written a vigorous attempt to treat art in a scientific manner comes from Sweden in Yrjö Hirn's *The Origins of Art.* Still it is not guided by any very clear *method.*